

# Classification of Microorganisms

Distinguishing between pathogenic, opportunistic, and normal flora organisms

## Respiratory

Pathogenic — Consider Treatment	Colonizer, but can become pathogenic: <i>If symptomatic consider treatment — Use best clinical judgment</i>	Uncommon outside of immunocompromised — <i>Use best clinical judgment</i>
Adenovirus	Fusobacterium nucleatum, necrophorum	Acinetobacter baumannii
Chlamydia pneumoniae	Haemophilus influenzae	Enterobacter cloacae complex, Klebsiella (Enterobacter) aerogenes
Coronavirus (229E, NL63, OC43, and HKU1)	Moraxella catarrhalis	Escherichia coli
COVID-19 Coronavirus (SARS-CoV-2)	Staphylococcus aureus	Klebsiella pneumoniae, oxytoca
Enterovirus D68	Streptococcus agalactiae (Group B Strep)	Proteus mirabilis, vulgaris
Epstein-Barr virus	Streptococcus pneumoniae	Pseudomonas aeruginosa
Human metapneumovirus	Streptococcus dysgalactiae (Group C & G Strep)	Serratia marcescens
Influenza virus A, B		
Legionella pneumophila		
Mycoplasma pneumoniae		
Parainfluenza virus (types 1,2,3,4)		
Respiratory syncytial virus		
Rhinovirus / Enterovirus		
Streptococcus pyogenes (Group A Strep)		

## Genitourinary

Pathogenic — Consider Treatment	Colonizer, but can become pathogenic: <i>If symptomatic consider treatment — Use best clinical judgment</i>	Uncommon outside of immunocompromised — <i>Use best clinical judgment</i>
Streptococcus pyogenes (Group A Strep)	Atopobium vaginae	Acinetobacter baumannii
	BVAB 2,3 (bacterial vaginosis associated bacteria 2,3); Mobiluncus spp.	Citrobacter freundii
	Enterococcus faecalis, faecium	Enterobacter cloacae complex, Klebsiella (Enterobacter) aerogenes
	Escherichia coli	Morganella morganii
	Gardnerella vaginalis	Pseudomonas aeruginosa
	Klebsiella pneumoniae, oxytoca	Serratia marcescens
	Megasphaera (types 1,2)	Staphylococcus aureus
	Proteus mirabilis, vulgaris	
	Streptococcus agalactiae (Group B)	
	Ureaplasma urealyticum	
	Ureaplasma parvum	
	Candida albicans, parapsilosis, tropicalis	
	Candida glabrata	
	Candida krusei	
	Staphylococcus saprophyticus	
	Staphylococcus epidermidis, haemolyticus, lugdunensis	

## STI

Pathogenic — Consider Treatment	Colonizer, but can become pathogenic: <i>If symptomatic consider treatment — Use best clinical judgment</i>
Chlamydia trachomatis	Mycoplasma genitalium
Neisseria gonorrhoeae	Mycoplasma hominis
Trichomonas vaginalis	

## Urinary Tract Infection

Pathogenic — Consider Treatment	Colonizer, but can become pathogenic: <i>If symptomatic consider treatment — Use best clinical judgment</i>	Uncommon outside of immunocompromised — <i>Use best clinical judgment</i>
Enterococcus faecalis, faecium	Streptococcus agalactiae (Group B Strep)	Acinetobacter baumannii
Escherichia coli	Ureaplasma urealyticum	Enterobacter cloacae complex, Klebsiella (Enterobacter) aerogenes
Klebsiella pneumoniae, oxytoca	Ureaplasma parvum	Candida albicans, parapsilosis, tropicalis
Proteus mirabilis, vulgaris	Staphylococcus epidermidis, haemolyticus, lugdunensis	Candida glabrata (Nakaseomyces glabratus)
Pseudomonas aeruginosa		Candida krusei (Pichia kudriavzevii)
Serratia marcescens		
Staphylococcus aureus		
Streptococcus pyogenes (Group A Strep)		
Citrobacter freundii		
Staphylococcus saprophyticus		

These are recommendations only. Providers should always use their best clinical judgment.